

CLAIMS

1. (Currently amended) A slowly implantable electrode comprising a shape-memory polymer coated electrode capable of being slowly implanted into tissue.

2. (Original) The electrode according to claim 1, wherein said electrode comprises a MEMS electrode.

Please cancel claim 3.

4. (Original) The electrode according to claim 3, wherein said polymer is bioresorbable.

5. (Original) The electrode according to claim 3, wherein said electrode further includes an anti-glutamate coating on an exterior surface of said electrode.

6. (Original) The electrode according to claim 1, wherein said electrode further includes an immunosuppressant coating on an exterior surface of said electrode.

7. (Original) The electrode according to claim 1, wherein said electrode is coated by a bioresorbable coating.

8. (Original) The electrode according to claim 1, wherein said electrode is surface engineered.

Please cancel claims 9-13.

14. (Original) A method for inserting an electrode into tissue by inserting the electrode of claim 1 into brain tissue.

15. (Currently amended) The method according to claim 14, wherein said inserting step includes inserting the electrode into tissue and slowly resorbing the a coating on the electrode into the brain.

16. (Currently amended) The method according to claim 14, wherein said inserting step includes slowly inserting placing the electrode within the tissue to be treated.

17. (Currently amended) The method according to claim 14, further including ~~surface engineering~~ altering surface structure of the electrode.

18. (Currently amended) A method of minimizing trauma and astrocytic scarring by slowly inserting the electrode of claim 1 into body tissue, thereby minimizing trauma and astrocytic scarring.

19. (Currently amended) The method according to claim 18, wherein said inserting step includes inserting the electrode into body tissue and slowly resorbing the a coating on the electrode into the tissue.

20. (Currently amended) The method according to claim 18, wherein said inserting step includes slowly inserting placing the electrode within the tissue to be treated.

21. (Currently amended) A slowly implantable electrode formed by using creating a slowly implantable electrode using MEMS technology.

22. (Currently amended) A slowly implantable electrode formed by coating an electrode with shape-memory polymers, thereby enabling the coated electrode to be slowly implantable.

Please cancel claim 23.

24. (Original) A slowly implantable electrode formed by coating an electrode with a bioresorbable coating.

25. (Original) An electrode for limiting micromovement in vivo, said electrode comprising an electrode and a bioresorbable coating on the exterior surface of said electrode.

Please cancel claim 26.

27. (Currently amended) A method of forming a slowly implantable electrode ~~using a formation method capable of by creating a slowly implantable electrode having~~forming ultra-fine electrodes.

28. (Currently amended) The method according to claim 27, wherein said ~~using~~ creating step includes using a method selected from the group consisting essentially of two-photon stereo lithography, micro-molding, MEMS, and ESA.

29. (Previously Presented) A slowly implantable electrode formed according to the method of claim 27.

30. (New) A method of minimizing trauma and astrocytic scarring by slowly inserting a slowly implantable electrode comprising a shape-memory polymer coated electrode and having a therapeutic coating into body tissue and allowing the body to absorb the therapeutic coating to minimize trauma and astrocytic scarring.